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Q4: How function works. Step by step?

Function Workflow (Step-by-Step):

1. Lexer Initialization:

- Create an instance of the **Lexer** class, passing the input source code as a parameter.

2. Main Program Loop:

- The main program starts a loop to tokenize the input code until the end of the file is reached.

3. Tokenization Loop (Lexer.GetNextToken()):

Skip Whitespace:

- The lexer skips any leading whitespace characters.

Check End of File:

- If the lexer has reached the end of the input code, return a token of type **EndOfFile**.

Read Current Character:

- Obtain the current character from the input code.

Token Recognition:

- Based on the current character, the lexer identifies and returns the corresponding token type.

- Handles operators (+, -, *, /), parentheses, and recognizes identifiers and numeric literals.

Move to Next Character:

- Move the lexer's position to the next character in the input code.

Repeat Loop:

- Continue the loop until the end of the file is reached.

4. Display Token Information:

- For each token obtained from the lexer, the main program prints its type and value.
- The loop continues until the end-of-file token is encountered.

5. End of Program:

- The main program concludes, demonstrating the basic functionality of the lexical analyzer.